Standard Telephones and Cables Limited
BRIMAR VALVE WORKS, FOOTSCRAY, SIDCUP, KENT, ENGLAND

BRIMAR

R. E. T. M. A. REGISTRATION DATA

TYPE 6516 H.F.Pentode

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This tube is a seven pin miniature indirectly heated R.F. power pentode designed for reliable operation under adverse conditions of shock and vibration. It is suitable for use as an A.F. power amplifier or a driven R.F. power amplifier up to 100 Mc/s. where a low heater dissipation is required. Electrically it is similar to the 6AM5.

Mechanical Data

Coated unipotential cathode

Outline drawing	5 - 2	Bulb	T - 5½
Base	E7 - 1	Miniature Button	7 - pin
Maximum diameter			3/4"
Maximum overall length			2.1/8"
Maximum seated height			1.7/8"
Pin connections		Basing	6CH

Pin 1 Grid No.1	Pin 5 Plate
Pin 2 Cathode, grid No.3	Pin 6 No connection
Pin 3 Heater	Pin 7 Grid No.2
Pin 4 Heater	

Mounting position	any
Maximum shock (in intermittent service)	500g
Maximum vibration (continuous service)	2½ g
Minimum mechanical resonance	100c/s

Electrical Data

Direct Inter-electrode Capacitances - with a close fitting external shield

Grid to plate (g_1 to p) max.	0.3μμF
Input: g_1 to $(h+k+g_2+g_3)$	4.25μμF
Output: p to $(h+k+g_2+g_3)$	6.5μμF

Ratings Design Centre Values except where indicated.

Heater voltage (AC or DC)	6.3 volts
Maximum heater cathode voltage*	±150 volts
Maximum plate voltage*	300 volts
Maximum plate voltage ($I_p = 0$)*	550 volts
Maximum plate dissipation*	4.75watts
Maximum grid No.2 voltage*	275 volts
Maximum grid No.2 voltage ($I_{g_2} = 0$)*	550 volts
Maximum grid No.2 dissipation*	0.80watts
Maximum grid No.1 - grid No.2 voltage	300 volts DC
Maximum grid No.1 - cathode voltage	100 volts DC
Maximum mean grid No.1 current	3.3 mA
Maximum cathode current	23 mA

Maximum grid No.1 - cathode resistance with cathode bias	680 KΩ.
Maximum grid No.1 - cathode resistance with fixed bias	220 KΩ.
Maximum operating frequency	100 Mc/s.
Maximum bulb temperature	180°C

(* = absolute ratings).

Typical Operating Conditions and Characteristics. Class A Amplifier

Heater Voltage	6.3 volts
Heater Current	0.2 amps
Plate Voltage	250 volts
Grid No.2 voltage	250 volts
Grid No.1 voltage	-13.5volts
Plate current	16 mA
Grid No.2 current	2.25mA
Plate resistance (approx.)	0.15 Megohms
Transconductance	2550µmhos
Optimum plate load	16,000 ohms
Power output	1.4 watts
Amplification factor (grid No.1 to grid No.2)	12